



Sub Spec  
Approved for  
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Atty. Dkt. No. 061300/0242

## **CLEAN SUBSTITUTE SPECIFICATION**

### **ENVIRONMENTAL SHIELD FOR A TRUCK MOUNTED CONCRETE MIXER**

#### **TECHNICAL FIELD OF THE INVENTION**

[0001] The present invention relates generally to preventing the leakage of wet concrete from a concrete mixer and, more particularly, to an environmental shield for preventing leakage from a truck-mounted concrete mixer.

#### **BACKGROUND OF THE INVENTION**

[0002] In part to enable transit concrete mixers to transport greater payloads, a reduction in weight of the concrete mixers has been commonly pursued. One technique to reduce the weight of truck mounted concrete mixers has been to eliminate a rear, closing door previously associated with such mixers. The elimination of the rear, closing door has given rise to the problem of leakage or spillage of wet concrete through the open end of the mixer drum. Such spillage or leakage may result from increased loads, transport across hilly terrain as well as surging of loads during transit.

[0003] While some efforts have been made to address the problem of leakage or spillage, they have generally been less than satisfactory. For example, the configuration of mixing blades within a mixer have some effect on maintaining wet concrete within the mixer. However, the mixing blades generally have an effect on minimizing leakage only when the mixer is rotated in the mixing direction. Other methods to address the problem of leakage have been directed principally towards returning any leakage or spillage to the mixer as opposed to preventing or reducing the leakage.

#### **SUMMARY OF THE INVENTION**

[0004] In accordance with teachings of the present disclosure, a system and apparatus are described for reducing or eliminating the leakage of wet concrete from truck-mounted concrete mixers. In one aspect of the present invention, a charging hopper for use in charging a rotatable mixer is provided. The rotatable mixer preferably includes a drum having a drum opening at one end for receiving and discharging contents. The charging hopper preferably includes a chute having a charging opening and a discharge opening at